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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/971,719	10/04/2001	Scott Clinton Baggs	10004916-1US	3040

7590 07/14/2005

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EXAMINER	
PATEL, KANJIBHAI B	
ART UNIT	**PAPER NUMBER**
2625	

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/971,719	BAGGS, SCOTT CLINTON	
	Examiner	Art Unit	
	Kanji Patel	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,14-17 and 20-22* is/are rejected.

7)☒ Claim(s) *12-13,18-19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

1. Applicant's amendment filed February 25 2005 has been entered.

Claims 1–22 are pending in the application.

Response to Arguments

Applicant's arguments, see pages 8-11 of the remarks, filed 2/25/05, with respect to the rejection(s)of claim(s) 1-11, 14-17, 20-22 under 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Zhang et al. (US 6,784,944 B2).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-11, 14-17 and 20-22 are rejected under 35 U.S. C. 102(e) as being anticipated by Zhang et al. (herein after Zhang) (US 6,784,944 B2).

For claim 1, Zhang discloses a method, comprising:

obtaining image data for a first type of noise region in a digital image (column 4, lines 62-67; small edge detection section 510 in figure 5 provides a first type of noise

region; in figure 6, a small mask 610 is used for determining the first type of noise region);

using said image data for said first type of noise region to locate a second type of noise region in said digital image (step 540 in figure 5 provides second type of noise; in figure 6, large mask 210 I used for determining the second type of noise region); and

filtering said second type of noise region (560 in figure 5).

For claims 21-22, see the rejection of claim 1 above.

For claim 2, Zhang discloses the method of claim 1, wherein said digital image (200) comprises color image data (column 5, lines 30-35, 46-48); wherein said first type of noise region comprises color image data (column 5, lines 30-35, 46-48); and wherein said second type of noise region comprises color image data (column 5, lines 30-35, 46-48).

For claim 3, Zhang discloses the method of claim 1, further comprising locating said first type of noise region in said digital image (column 4, lines 62-67; salt and pepper noise area is first type of noise which is tagged; a small mask of 3x3 in figure 6 is used to determine the first type of noise region in the image).

For claim 4, Zhang discloses the method of claim 3, wherein locating said first type of noise region in said digital image comprises:

using an edge detect filter (510) to locate an edge in said digital image;

determining whether said edge is less than or equal to a first reference area (column 4 line 62 to column 5 line 46); and if said edge is determined to be less than or

equal to said first reference area, tagging said edge as said first type of noise region (figure 5, 520).

For claim 5, Zhang discloses the method of claim 3, wherein locating said first type of noise region in said digital image comprises using out-range pixel smoothing (530, 550 in figure 5) to locate said first type of noise region.

For claim 6, Zhang discloses the method of claim 1, further comprising allowing a user to decide whether said second type of noise region is filtered (540, 550, 560).

For claim 7, Zhang discloses the method of claim 1, wherein using said image data for said first type of noise region to locate a second type of noise region in said digital image comprises: locating in said digital image a group of adjacent pixels, each pixel of said group of adjacent pixels having image data substantially similar to the image data for said first type of noise region (figures 5-6; column 4 line 62 to column 5 line 46); and determining whether said group of adjacent pixels is less than or equal to a second reference area (figures 5-6).

For claim 8, Zhang discloses the method of claim 7, further comprising allowing a user (column 4, lines 46-49) to select said second reference area.

For claim 9, Zhang discloses the method of claim 7, wherein the image data for said first type of noise region comprises a gray scale value (column 3, lines 29-48); wherein the image data for each pixel of said group of adjacent pixels comprises a gray scale value; and wherein the image data for a corresponding pixel of said group of adjacent pixels is substantially similar to the image data for said first type of noise region when the absolute value of the gray scale value of said corresponding pixel

subtracted from the gray scale value of said first type of noise region is less than a threshold number (column 4, lines 6-31).

For claim 10, Zhang discloses the method of claim 9, further comprising allowing a user (column 4, lines 5-61) to select said threshold number.

For claim 11, Zhang discloses the method of claim 7, wherein the image data for said first type of noise region comprises color image data (column 5 lines 32-35, 46-48); and wherein the image data for each pixel of said group of adjacent pixels comprises color image data (column 5, lines 32-35, 46-48).

For claim 14, Zhang discloses the method of claim 1, wherein filtering said second type of noise region from said digital image comprises:

obtaining image data for a region in said digital image (figure 5, 540, 550, 560);

computing average image data from the image data for said region (figure 7); an

mapping said average image data to said second type of noise region (figure 7).

For claim 15, Zhang discloses the method of claim 14, wherein said region comprises at least one pixel located adjacent said second type of noise region (figures 5-6).

For claim 16, Zhang discloses the method of claim 14, further comprising allowing a user (column 4, lines 46-49) to select said region.

For claim 17, see the rejection of claim 9 above.

For claim 20, Zhang discloses the method of claim 1, wherein filtering said second type of noise region comprises: subdividing said second type of noise region into a plurality of subsections (figure 6);

obtaining image data for a region associated with each of said plurality of subsections (figures 5-6);

computing average image data for each of said regions from its image data (figure 7; and mapping said average image data for each of said regions to a corresponding one of said plurality of subsections (figure 7).

Allowable Subject Matter

3. **Claims 12-13 and 18-19** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other prior art cited

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kuwahara (US 5,317,420) discloses a noise elimination apparatus for having a high density and a low density.

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kanji Patel whose telephone number is (703) 305-4011. The examiner can normally be reached on Monday to Thursday from 8:00 am to 6:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kanji Patel
AU 2625
July 10, 2005

KANJIBHAI PATEL
PRIMARY EXAMINER